

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. Reconsideration of the subject patent application in view of the present remarks is respectfully requested.

Claims 1, 3-6, 14 and 15 are amended.

Claims 2 and 12-13 are cancelled.

Claim Rejections - 35 USC §102

Claims 1, 3-5, 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Parks et al. (4,866,247; hereinafter "Parks"). Applicants respectfully request withdrawal of the rejection for at least the following reasons.

Claim 12 is cancelled. Thus, the rejection as it applies to claim 12 should be withdrawn.

Regarding claim 1, Parks does not disclose a step of controlling a welding output current to have a peak current in the short circuit period and a step of controlling the welding output current for a set given period **starting from the arc recurrence** to be **always higher** than the peak current of the welding output current in the short circuit period, wherein a value of the welding output current for the set given period is determined based on a value of the peak current in the short circuit period.

The Office action states that Parks in column 9, lines 53-54 clearly states the term "higher current" in reference to the boost current. However, Parks merely states that the high current flow started at time T3 when the arcing condition comes into existence (Parks; column 9, lines

53-54). There is no disclosure in Parks that the current flow started at time T3 (the arc recurrence) is always higher than a peak current between times T2-T3 (the short circuit period). The Office action states that column 14 Example in Parks defines the welding current as 160 amps and the boost current as 330 amps. However, the column 14 Example in Parks merely defines the plasma current 110 as 160 amps and the plasma boost current 100 as 330 amps. Neither 330 amps nor 160 amps is a peak current in a short circuit period. The column 14 Example in Parks is silent about controlling a plasma current starting from time T3 to be always higher than a peak current between times T2-T3.

Also, in the amendments, the welding current is controlled to have a peak current in the short circuit period, and the value of the welding output current for the set given period from the arc recurrence is determined by the peak current (see paragraph [0016] of the English specification, for example). Detailed determination would be recited in the current claims 3 and 4.

In Parks, as shown in the circuit diagram in Fig. 1, PINCH CONTROL T2-T3 period (PINCH current 50) and PLASMA BOOST CONTROL T3-T4 period (PLASMA BOOST current 80) are controlled by separate switches (SW1, SW2), respectively. That is, the current value in PLASMA BOOST is NOT determined by the current value in PINCH period, but determined independent of that in PINCH period.

Therefore, since every limitation of claim 1 is not taught by the reference, claim 1 is not fully anticipated by Parks. Thus, withdrawal of the rejection as it applies to claim 1 is respectfully requested.

Similar arguments will apply to claim 14.

Claims 3-5 which are dependent from claim 1 should also be allowable for at least the same reason.

Claims 6, 7, 9-11, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (6,002,104) taken with Parks. Applicants respectfully request withdrawal of the rejection for at least the following reasons.

Claim 13 is cancelled. Thus, the rejection as it applies to claim 13 should be withdrawn.

Regarding claim 6, neither Hsu nor Parks, alone or in combination, discloses, teaches or render foreseeable that the arc initial control part controls a welding current **at an arc recurrence time** in the arc initial control time set by the timer part and starting from the arc recurrence to be **always higher** than a peak current of the welding current in the short circuit period, a value of the welding current at the arc recurrence time being determined based on a value of the peak current in the short circuit period. Hsu does not disclose the above feature, as admitted by the Examiner in the previous Office action. Parks does not disclose the above feature, as discussed above regarding claim 1. Accordingly, the combination of Hsu and Parks does not meet all of the limitations of the claim 6, since the combined machine would not have a function that the arc initial control part controls a welding current in such a manner as described above. Therefore, the asserted combination of Hsu and Parks does not render claim 6 obvious. Thus, withdrawal of the rejection as it applies to claim 6 is respectfully requested.

Similar arguments will apply to claim 15.

Claims 7, 9-11 and 13 which are dependent from claim 6 should also be allowable for at least the same reason.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NGB-39709.

Respectfully submitted,

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Date: July 22, 2009